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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Dan Martin Scott

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EXAMINER

AMINI, JAVID A

ART UNIT

PAPER NUMBER

2672

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/537,849

Applicant(s)

SCOTT ET AL

Examiner

Javid A. Amini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/12/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/24/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

Information Disclosure Statement

The information disclosure statement (IDS) submitted on Oct 24, 2005 was filed after the mailing date of the Non-final office action on 7/12/2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Examiner's comments: Applicant's invention relates to a system and method for associating specific points on digital raster maps with a geographic coordinate system. On the other hand the Saylor as a primary reference creates a vector map, which is aligned with a raster map. The aligned maps provide an X, Y coordinate basis for the locating of specific addresses within the territory represented by the raster map.

Response to Arguments

Applicant's arguments filed 10/12/2005 have been fully considered but they are not persuasive.

Applicant on page 2 of the remarks does not clarify the Examiner's question, i.e. Is the computing georeferencing function on page 10 lines 19-27 of the specification considered as a look up table?

Applicant on the same page at last paragraph argues the Examiner has not established a prima facie case of obviousness.

Examiner's reply:

The reference Saylor in fig. 2 teaches the raster map and the vector image (Applicant referred as a georeferencing image). In fig. 2 box 38 displaying the raster and the vector images, and as

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Applicant on page 11 lines 17-18 discloses that the user will manipulate the maps ... it means identifying image coordinates. Saylor at col. 5, lines 30-41 teaches the raster scanned images and the vector maps generated from the vector background database (TIGER) are overlaid and aligned, 38 "Overlay Raster Scan and Vector Background Images." This operation can be manually accomplished or, if desired, software can be used to automate the process.

Approximations in alignment will be necessary since the raster maps were created from hand-drawn maps. In certain applications, "eyeballing" of the raster image to the vector map may produce a sufficient degree of accuracy for a utility company. However, this approach may result in an unacceptable degree of accuracy for a different utility company.

Applicant on page 3 at third paragraph argues the reference system uses a vector database to create a vector map that is aligned with a raster map produced from an existing hand-drawn map.

Examiner's reply: The claim language "georeferenced map" is very broad and reads the reference's limitation as the "vector image", i.e. used as a background image associated with information, e.g. LAT/LON.

Applicant on page 4, at the second paragraph argues that the reference does not teach computing a georeferencing function that relates the raster map and the georeferenced map to each other.

Examiner's reply: Contrary, The reference in fig. 2 box number 38 clearly illustrates the georeferencing function that relates to images.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-22 rejected under 35 U.S.C. 103(a) as being unpatentable over Saylor et al.

(hereinafter, Saylor).

1. Claim 1, and claim 9.
2. As per claim 1, “a method for georeferencing a raster map image, comprising: displaying a raster map and a georeferenced map,” Saylor in col. 2 lines 26-47 discloses the limitations for generating method that include the steps of: obtaining a raster image of the existing map; providing a vector database having information characteristic to the territory represented by the rasterized map; displaying a vector map from the vector database, the displayed vector map containing information characteristic to the territory depicted in the rasterized map; substantially aligning corresponding areas of the raster map and the vector map; geocoding the object database information with X,Y coordinates relative to the vector database, at least some of the X,Y coordinates identifying locations of addresses within the territory depicted by the aligned raster and vector maps, also see fig. 2.

As Applicant in lines 3-4 claims, “wherein the raster map and the georeferenced map are separate maps”. Saylor in fig. 2 boxes 34 and 30 illustrates two separate maps.

“marking a first point on the raster map”. Saylor in col. 7, lines 9-14 teaches the particular location along the vector of the subject address can be readily determined by one skilled in the art using point/slope geometry. The limitation of “identifying image coordinates associated with

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the annotated point on the raster map”, Saylor in col. 3, lines 8-11 discloses at least some of the X,Y coordinates assigned to the object database information identify addresses within the territory depicted by the aligned raster and vector maps. The following limitation of “marking a first point on the georeferenced map”, Saylor in fig. 2 illustrates a raster scan and an import vector data. A person skill in the art would have been recognizing box number 30 as scanning maps as a raster map or a vector map, and box number 34 as a digitized map data. Saylor is silent explicitly to the claim language of “marking a first point on the georeferenced map”. Saylor in fig. 2, box 38 illustrates overlay raster and vector images, when a person skill in the art marks a point in box 38, actually, marking two maps. The claim limitations are as follows: “identifying geographic coordinates associated with the first point on the georeferenced map that correspond to the first point on the raster map; marking a second point on the raster map; identifying image coordinates associated with the second point on the raster map; marking a second point on the georeferenced map; and identifying geographic coordinates associated with the second point on the georeferenced map”, Saylor in col. 2 lines, 49-61 teaches a raster map and the X,Y object database coordinates in a database for subsequent selective display. Using this prestored information, a method for displaying a serviceable event on a rasterized image of a utility network distribution map is also provided. This displaying technique includes the steps of: receiving a customer service call and identifying an address associated with the serviceable event; identifying from the restored database the X,Y coordinates of the address associated with the serviceable event; and displaying the appropriate raster map and a graphical representation of the serviceable event using the X,Y coordinates of the event address.

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The following limitations “computing a georeferencing function that relates the raster map and the georeferenced map to each other, wherein the georeferencing function specifies a relationship between the image coordinates of the raster map and the geographic coordinates of the georeferenced map.” Saylor in col. 4, lines 7-19 teaches besides raster/vector overlaying capabilities, this multi/simultaneous user software includes CAD capabilities to create nested drawings and maps with graphical tools, complete coordinate geometry features to facilitate the designing and inputting of field and map surveying information for highways, waterways, etc., a graphical relations database system for tracking information contained on maps and drawings, information manipulation capabilities including the ability to zoom and pan maps, and an advanced programmers toolkit which allows users with programming experience to customize the software to particular applications using a high level interface language such as Fortran 77. It would have been obvious at the time the invention was made to one of ordinary skill in the art to provide for marking more than one point on the raster or vector maps, and Saylor teaches overlay two separate images (see fig. 2, boxes 30 and 34), while Applicant does not specify overlay images or occupying different area from each other. Since it has been held that providing more than one point where needed is obvious.

A similar rejection applies to the claim 9.

3. As per claim 2, “the method of claim 1, further comprising: using the georeferencing function to determine the geographic coordinates of at least one feature on the raster map”, the step is obvious because Saylor in fig. 5, steps 76-80 illustrates the step.

4. As per claim 3, “the method of claim 1, further comprising: storing the georeferencing function”, Saylor in fig. 4 step 88.

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5. As per claim 4, “the method of claim 1, further comprising: manipulating the raster map to display a location on the raster map; and updating the display of the georeferenced map to display a location identical to the location displayed on the raster map”, See rejection of claim 1.

6. As per claims 5 and 13, “the geographic coordinates are latitude and longitude” Saylor in col. 5, lines 20-26 teaches that a particular vector database, along with providing information on individual names and addresses, provides latitude/longitude identifiers for each vector.

7. As per claim 6, “the raster map and the georeferenced map are displayed on the same computer display”, Saylor discloses the overlay images in fig. 2.

8. As per claim 7, “the corresponding points are marked by a user after visually determining geographically corresponding points”, Saylor in col. 2, lines 26-47 teaches for obtaining a raster image of the existing map; providing a vector database having information characteristic to the territory represented by the rasterized map; displaying a vector map from the vector database, the displayed vector map containing information characteristic to the territory depicted in the rasterized map; substantially aligning corresponding areas of the raster map and the vector map; geocoding the object database information with X,Y coordinates relative to the vector database, at least some of the X,Y coordinates identifying locations of addresses within the territory depicted by the aligned raster and vector maps; and displaying the raster map with at least one graphical representation of an address located within the territory represented by the raster map, the graphical representation being expandable to provide object database information on the at least one address.

9. As per claim 8, “the method of claim 1, wherein the georeferencing function is represented by a set of general linear functions”, The step or the claim language of “a set of

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general linear functions” is obvious because, Saylor in fig. 2 box 36 converts Lat/Lon to X, Y coordinate pairs and this can be called georeferencing function.

10. As per claim 10, “the apparatus of claim 9, further comprising: means for using the georeferencing function to determine the geographic coordinates of at least one feature on the raster map”, See rejection of claim 2.

11. As per claim 11, “the system of claim 9, further comprising: means for storing the georeferencing function”, see rejection of claim 3.

12. As per claim 12, “the apparatus of claim 9, further comprising: means for manipulating, the raster map to display a location on the raster map; and means for updating the display of the georeferenced map to display a location identical to the location displayed on the raster map”, see rejection of claim 4.

13. As per claim 14, “the apparatus of claim 9, wherein the raster map and the georeferenced map are displayed on the same computer display”, see rejection of claim 6.

14. As per claim 15, “the apparatus of claim 9, wherein the corresponding points are marked by a user after visually determining geographically corresponding points”, see rejection of claim 7.

15. As per claim 16, “the apparatus of claim 9, wherein the georeferencing function is represented by a set of general linear functions”, see rejection of claim 8.

16. Claim 17, “The method of claim 1 further comprising identifying image coordinates associated with at least one point on the raster map; identifying geographic coordinates of points on the georeferenced map that correspond to the point identified on the raster map; and revising the georeferencing function”. Saylor in fig. 2 illustrates the claim language.

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17. Claim 18, "The method of claim 17, wherein revising further comprises disregarding any points previously identified that are substantially inconsistent with the georeferencing function", See rejection of claim 17.

18. Claim 19, "The apparatus of claim 9 further comprising: means for identifying image coordinates associated with at least one point on the raster map; means for identifying geographic coordinates of points on the georeferenced map that correspond to the point identified on the raster map; and means for revising the georeferencing function", See rejection of claim 17.

19. Claim 20, "the apparatus of claim 19, wherein the means for revising further comprising means for disregarding any points previously identified that are substantially inconsistent with the georeferencing function", see rejection of claim 17.

Claims 21 and 22, the claims' languages claim the georeferencing function store in a database. See Saylor in fig. 2 box 48.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A. Amini whose telephone number is 571-272-7654. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Javid Amini


JEFFERY BRIN
PRIMARY EXAMINER

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